

List of All Chemicals

P Rauvolfia serpentina (Apocynaceae)

Common name(s)

Indian Snakeroot; Serpentine Wood

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Part	All	Low PPM	High PPM	StdDev	*Reference
11-METHOXY-DELTA-TOHIMBINE	Root	--	--	--	--	*
2,6-DIMETHOXYBENZOQUINONE	Plant	--	--	--	--	*
Activities (5)						
Allergenic	Mitchell, J. and Rook, A.J. 1923. Botanical Dermatology: plants and plant products injurious to the skin. Vancouver: Greengrass, 1979. xiii, 787 p.: ill.					
Antileukemic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
Dermatitogenic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
Pesticide						
Phytohormonal	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
3,4,5-TRIMETHOXYBENZOIC-ACID	Plant	--	--	--	--	*
3-EPI-ALPHA-YOHIMBINE	Root	--	--	--	--	*
AJMALEXINE	Root	2000.0	3000.0			*
AJMALICINE	Root	--	--	--	--	*
Activities (11)						
Adrenolytic	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.					
Antidiadrenergic	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.					
Antiaggregant						
Antidiuretic	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.					
Antihypertensive	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
CNS-Depressant						
Cerebrocirculant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
Circulotonic	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.					
Hypotensive	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.					
Sympatholytic	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.					
Tranquilizer	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
AJMALINE	Root	--	--	--	--	*

Activities (16)

Adrenolytic	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Allergenic	
Antiarrhythmic 200-300 mg/orl/man/day	
Antihypertensive	
Antihypertonic	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Calcium-Antagonist gpg	
Cardiodepressant	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Cardiotoxic	Martindale's 29th
Convulsant	Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp.
Coronary-Dilator	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Hypotensive	
Myocardiodepressant	
Neurotoxic	
Peristaltic	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Respirastimulant	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Tranquilizer	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp.

AJMALININE

Root -- -- *

Activities (3)

Hypotensive	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Nephrovasodilator	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Sympatholytic	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

ALKALOIDS	Seed	1300.0	2000.0	-0.71	*
ALKALOIDS	Root	15000.0	24000.0	0.25	*
ALLOYOHIMBINE	Root	--	--		*
ASK	Seed	9000.0	19000.0		*
CALCIUM	Seed	3400.0	6900.0	0.51	*

Activities (28)

AntiPMS 1 g/day	
Antiallergic 500 mg/day	
Antianxiety	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiarrhythmic 500-1,500 mg	
Antiarthritic 1,000 mg/day	
Antiatherosclerotic 500 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Anticlimacteric 1,000-1,500 mg/day	
Antidepressant	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidote (Aluminum)	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidote (Lead)	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihyperkinetic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihypertensive	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiinsomniac	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antimenopausal 1,000-1,500 mg/day	
Antiobesity	
Antiosteoporotic 500-2,000 mg/day	
Antiperiodontitic 750 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antirheumatic 1,000 mg/day	
Antistress 500-1,500 mg/day	
Antitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Anxiolytic 500-1,500 mg/day	
Calcium-Channel-Blocker	
Diuretic	
Hypocholesterolemic 500 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Hypotensive 1 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Laxative 1,000-1,200 mg	
Tranquilizer 500-1,500 mg/day	
Vasodilator	

CHANDRINE	Root	--	--	--	*
Activities (1)					
Antiarrhythmic					
CORYNANTHINE					
	Plant	--	--	--	*
Activities (8)					
Adrenergic-Blocker					
Anesthetic					
Antimalarial IC50=>200 uM	Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. Africa Herbal Antimalaria Meeting. PlantaPhile Publications, Berlin. 72 pp.				
Antiplasmodial IC50=>200 uM	Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. Africa Herbal Antimalaria Meeting. PlantaPhile Publications, Berlin. 72 pp.				
Aphrodisiac					
Bradycardic					
Hypotensive					
Sympatholytic					
DELTA-YOHIMBINE	Root	--	--	--	*
DESERPIDINE	Plant	--	--	--	*
Activities (8)					
Antiandrogenic					
Antifrigidity					
Antihypertensive	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.				
Estrogenic					
Hypotensive 250-1,000 ug/man/day	Martindale's 29th				
Mastogenic					
Sedative	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.				
Tranquilizer 100-1,000 ug/man/day	Martindale's 29th				
EUDESMIC-ACID	Plant	--	--	--	*
FAT	Seed	10000.0	97000.0	-0.89	*
FIBER	Seed	565000.0	755000.0	4.9	*
Activities (15)					
Angiotensin-Receptor-Blocker					
Antidiabetic					
Antihypertensive					
Antibesity					
Antitumor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Antiulcer	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Beta-Blocker					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Cardioprotective					
Diuretic					
Hypocholesterolemic					
Hypotensive 10 g/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Hypouricemic					
Laxative					
Vasodilator					
GAMMA-YOHIMBINE	Root	--	--	--	*
ISOAJMALINE	Root	--	--	--	*
ISORAUHIMBINE	Root	--	--	--	*
ISORAUNITIDINE	Plant	--	--	--	*
ISOSANDWICINE	Plant	--	--	--	*
ISOYOHIMBINE	Root	--	--	--	*
METHYL-RESERPATE	Root	--	--	--	*
NEOAJMALINE	Root	--	--	--	*

NITROGEN	Seed	5500.0	16000.0	-0.67	*
PAPAVERINE	Root	--	--		*
Activities (26)					
AntiHIV 10 ug/ml 900 mg/man/day/orl					
Antianginal					
Antasthmatic					
Anticerebrotic	Economic & Medicinal Plant Research, 6: 189.				
Anticholinergic					
Antiedemic	Economic & Medicinal Plant Research, 6: 189.				
Antiimpotence	Martindale's 29th				
Antiischemic 60-600 mg/ivn/man/day	Martindale's 28th				
Antimeasles					
Antimigraine 150 mg/man/2x/day	Martindale's 28th				
Antipsoriac 1% topical	Martindale's 28th				
Antispasmodic ED50=4.55 uM					
Antispasmodic EC50=2.8-16 uM	Ortiz de Urbina, J.J., Martin, M.L., Sevilla, M.A., Montero, M.J., Carron, R., and San Roman, L. Antispasmodic Activity on Rat Smooth Muscle of Polyphenol Compounds Caffeic and Protocathechic Acids. <i>Phytotherapy Research</i> 4(2): 73, 1990.				
Antitussive	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Antiviral	Economic & Medicinal Plant Research, 6: 189.				
Arteriodilator					
Calcium-Antagonist gpg					
Cardiovascular 100 mg/kg orl mus	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook</i> . (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.				
Catatonic 60 mg/kg ipr mus	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook</i> . (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.				
Cerebrovasodilator	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Myorelaxant 100 uM					
Phosphodiesterase-Inhibitor					
Reverse-Transcriptase-Inhibitor 10 ug/ml					
Uterosedative 30 mg/kg ivn rat	Ozaki, Y. and Ma, J-P. 1989. Inhibitory Effects of Tetramethylpyrazine and Ferulic Acid on Spontaneous Movement of Rat Uterus in Situ. <i>Chem. Pharm. Bull.</i> 38(6): 1620-1623, 1990.				
Vasodilator	Merck 11th Edition				
cAMP-Phosphodiesterase-Inhibitor					
PHOSPHORUS	Seed	700.0	2200.0	-0.83	*
Activities (4)					
Antiosteoporotic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.				
Anxiolytic					
Immunostimulant	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.				
Osteogenic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.				
RAUBASINE	Plant	--	--		*
Activities (3)					
Antiaggregant	Merck 11th Edition				
Antihypertensive	Merck 11th Edition				
Antiischemic	Merck 11th Edition				
RAUGALLINE	Plant	--	--		*
RAUHIMBINE	Root	--	--		*
RAUNATINE	Root	--	--		*
RAUNOLININE	Root	--	--		*
RAUPINE	Root	--	--		*
RAUWOLFININE	Plant	--	--		*
RAUWOLSCINE	Plant	--	--		*

Activities (2)

Adrenergic-Blocker

Hypotensive

RENOXIDINE	Plant	--	--	*
RESAJMALINE	Root	5000.0	8000.0	*
RESCIDINE	Plant	--	--	*
RESCINNAMINE	Root	25.0	75.0	*

Activities (3)

Antihypertensive 250-1,000 ug/man/day/

Martindale's 28th

Sedative

Tranquilizer

RESERPILINE	Root	--	--	*
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Activities (1)

Antihypertensive

Martindale's 28th

RESPERINE	Root	100.0	2000.0	*
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Activities (32)Abortifacient 0.04 mg/kg ipr?
rbt

Abortifacient

AntiRaynaud's 1-1.5
mg/iar/man/day Martindale's 28th

Antiadrenergic

Anticonvulsant

Antidyskinetic 500-5,000
ug/man/day Martindale's 28thAntihypertensive 250-500 ug
/man/day Martindale's 28th

Antileukemic

Antimigraine Martindale's 28th

Antipsychotic 100-1,000
ug/man/day Martindale's 28th

Antipyretic

Antischizophrenic

Antistress

Antitumor

Bradycardic Martindale's 28th

CNS-Depressant

Calcium-Antagonist 1 uM rbt,
rat, gpg

Catecholaminolytic Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Hepatoprotective

Hypotensive Merck 11th Edition

Hypothermic 2.5 mg/kg scu
müs

MDR-Inhibitor 2.5-10 uM

Peristaltic

Rodenticide Martindale's 28th

Sedative Martindale's 28th

Serotoninolytic Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Teratogenic 1-2 mg/kg ims ipr
rat

Tranquilizer Merck 11th Edition

Tumorigenic 5-10 ppm feed

orl mus

Ulcerogenic 0.1 mg/kg/day/6
weeks imr rat

Uterotonic Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.

Vasoconstrictor

RESERPININE	Root	--	--	*
RESERPOXIDINE	Root	--	--	*

SANDWICINE	Plant	--	--		*
SANDWICOLIDINE	Plant	--	--		*
SARPAGINE	Root	--	--		*
SERPAJMALINE	Root	13000.0	16000.0		*
SERPAKRINE	Plant	--	--		*
SERPENTINE	Root	--	--		*
Activities (9)					
Antibacterial					
Antitumor					
Carcinogenic	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses				
Fungicide	Recio, M. C., Rios, J. L., and Villar, A., A review of some antimicrobial compounds isolated from medicinal plants reported in the literature 1978-1988, <i>Phytotherapy Research</i> , 3(4), 1989, 117-125.				
Hypotensive					
Pesticide					
Sedative					
Topoisomerase-II-Inhibitor 50 uM	Dassonneville, L., et al. 1999. Stimulation of Topoisomerase II-Mediated DNA Cleavage by Three DNA-Intercalating Plant Alkaloids: Cyptolepine, Matadine, and Serpentine. <i>Biochemistry</i> , 38: 7719-7726.				
Tranquilizer					
SERPENTININE	Root	--	--		*
SERPENTININE	Plant	--	--		*
SERPINE	Root	--	--		*
SERPININE	Root	--	--		*
SERPOSTEROL	Root	--	--		*
STARCH	Seed	126000.0	203000.0	-0.43	*
Activities (5)					
Absorbent	Martindale's 29th				
Antidote (Iodine)	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Antinesidioblastosic	Martindale's 29th				
Emollient	Martindale's 29th				
Poultice	Martindale's 29th				
STIGMASTEROL	Plant	--	--		*
Activities (12)					
Antihepatotoxic					
Antiinflammatory	Lawrence Review of Natural Products, 1995				
Antinociceptive					
Antiophidic 2.3 mg ipr mus	Economic & Medicinal Plant Research, 5: 363.				
Antioxidant IC33=10 uM					
Antiviral	Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in <i>Artemisia annua</i> . <i>Plant Science</i> , 75: 161-165, 1991.				
Artemicide LC50=110 ppm	Jung, J.H., Pummangura, S., Chaichantipyuth, C., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of <i>Melodorum fruticosum</i> . <i>Phytochemistry</i> . 29(5): 1667-1670. 1990.				
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Estrogenic					
Hypocholesterolemic	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp.				
Ovulant					
Sedative					
TETRAPHYLLICINE	Root	--	--		*
THEBAINE	Root	--	--		*

Activities (7)

Analgesic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antipolio	
Antiviral	
CNS-Stimulant	
Convulsant	Merck 11th Edition
Narcotic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Pesticide	

VIMILENINE	Plant	--	--		*
VOMALIDINE	Plant	--	--		*
WATER	Seed	55000.0	87000.0	-0.54	*
YOHIMBINE	Root	--	--		*

Activities (37)

Adrenergic-Blocker	
Adrenolytic 2 mg/kg ivn rbt	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Adrenolytic 5 mg/kg ivn rat	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Adrenolytic 0.2 mg/kg ivn dog	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Anesthetic	
Antiacyetylcholinesterase	
Antiangular	
Antiatherosclerotic	
Antidepressant	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antidiuretic	Martindale's 28th
Antidopaminergic	
Antidote (Barbiturate) 0.25 mg/kg ivn dog	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Antihypertensive	
Antiketaminic 0.25 mg/kg ivn cat	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Antiparaesthesia 6 mg/3xday/man/orl	Martindale's 28th
Antiserotonin	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Anxiogenic	
Aphrodisiac	Williamson, E. M. and Evans, F. J. <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
CNS-Depressant 8 mg/kg ivn rbt	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
CNS-Depressant 5 mg/kg scu rat	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
CNS-Depressant	Williamson, E. M. and Evans, F. J. <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
CNS-Stimulant	
Calcium-Antagonist 3 uM rat	
Cardiotonic	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Cardiovascular 1 mg/kg ivn rat	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. <i>Drug Dosage in Laboratory Animals: A Handbook.</i> (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Cholinergic	
Emetic	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Hypertensive 5 mg/man orl	
Hypothermic	
MAO-Inhibitor	
MDR-Inhibitor 10 uM	Bhat, U. G., et al. 1995. A Structure-Function Relationship Among Reserpine and Yohimbine Analogues in Their Ability to Increase Expression of MDR1 and P-Glycoprotein in a Human Colon Carcinoma Cell Line. <i>Mol Pharmacol</i> , 48(4): 682-689.
Mydriatic	Merck 11th Edition
Respirodepressant	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Respirostimulant	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Rhinorreic 20-30 mg/man	
Sialogogue 0.3 mg/kg ivn rat	
Tremorigenic	